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St. Bartholomew's Hospital Journal,

JUNE, 1903.

"Æquam memento rebus in arduis
Servare mentem."—*Horace,* Book ii, Ode iii.

Three Lectures on the Principles of Disinfection.

Delivered at the beginning of the Summer Session by

F. W. ANDREWES.

LECTURE III.

THE number of chemical substances which may be employed as bacterial poisons is a very large one, but those fulfilling the requirements which have just been sketched are not very numerous. It is impossible here to give anything approaching a complete account of the different substances which are employed as chemical disinfectants, or even of all those which are in common use; but it may be useful to give an outline of the facts concerning the most important amongst them, stating their antiseptic and germicidal value, the uses which they may specially serve, and the drawbacks which may attend them.

The strong *mineral acids* and *caustic alkalies* may be dismissed in a few words, because their corrosive properties unfit them for most purposes. In concentrated form they are very potent germicides, chemically destroying all forms of protoplasm almost instantaneously. But in weaker solutions, such as are suited for practical use, they are not so potent as might have been anticipated. It requires solutions of 5 to 10 per cent. to destroy bacterial spores in reasonable time—say in an hour. Where a limited quantity of infected material has to be dealt with, and it is desired to carry out an energetic disinfection in a short time, a strong mineral acid may sometimes be useful if the process can be carried out in glass or earthenware vessels. But the product requires free dilution before it is poured down a water-closet or sink, lest the acid attack the metal pipes. The simplest way of sterilising a bottle or test-tube is to rinse it with a pure mineral acid, and then wash it out repeatedly with boiled water till all traces of the acid are removed. Different bacteria vary in their tolerance of acids, but there is one—the spirillum of Asiatic cholera—which is exceedingly sensitive to them, and is killed even by weak acids. These may therefore be usefully employed in the disinfection of choleraic discharges.

Metallic salts.—Most soluble salts of the heavy metals are active disinfectants, but mercury is practically the only metal which furnishes salts of sufficient cheapness, combined with high germicidal value, to be of general utility. The salts of copper and lead come very far behind those of mercury in germicidal value, and are not much employed. The mercuric salts need alone be considered, as the proto-salts are too insoluble to be of service. Three per-salts of mercury are in use—the chloride, iodide, and cyanide. Of

these the iodide has the disadvantage that it is insoluble in water: the addition of iodide of potassium is required to get it into solution, and this in part hinders its ionisation and detracts from its germicidal powers. It is nevertheless commonly asserted in books to be superior to the perchloride as a disinfectant. Krönig and Paul, however, in a series of very careful experiments upon mercuric chloride, bromide, iodide, and cyanide, in which the salts were compared in equimolecular solutions, and in which equivalent amounts of the corresponding potassium salts were added (in order that all might be exactly comparable with the iodide, which will not dissolve without this addition), obtained the following order of germicidal value. The perchloride was the most powerful, and the bromide was not far behind it; the iodide was distinctly inferior to either, while the cyanide was by very much the feeblest disinfectant of the four, probably owing to its lower power of ionisation. Thus even in comparable solutions the perchloride beats the iodide, and, inasmuch as it can be dissolved in pure water, its superiority is greater than Krönig and Paul's figures indicate. It is sometimes stated that the iodide is more efficacious than the perchloride in presence of albuminous matter. This is untrue. The precipitate formed with the iodide is, it is true, redissolved in a short time, but its germicidal powers in presence of albuminous material were tested for me very carefully by Mr. G. E. Barry, and proved distinctly inferior to those of the perchloride.

Enough has been already said about the value and properties of mercuric chloride, since it was taken as an example in discussing the principles involved in the study of a disinfectant. The drawbacks attendant upon all mercuric salts are their action upon metals, their highly poisonous character, and their comparative inefficiency in the presence of albuminous material. In spite of these drawbacks they remain amongst the most valuable and reliable chemical disinfectants at our command, provided that they are employed with a due knowledge of their limitations.

Oxidising agents.—In these we possess a very valuable means of destroying bacterial protoplasm. Nitric acid is, of course, an oxidising agent, and so are chlorine and, above all, hypochlorous acid. There are a good many superoxidised compounds which are ready to part with some of their oxygen: such are peroxide of hydrogen, the permanganates and persulphates. Amongst these superoxidised compounds are some which are of very considerable use as disinfectants, and they have a particular value in two respects. They are practically non-poisonous to man, which of itself opens a wide field for them as gargles, and for washing out mucous cavities. They further destroy the organic matter in which bacteria breed, so that they attack infectious material from two sides at once, in part killing them directly, and in part depriving the remainder of their means of subsistence. As actual germicides these superoxidised compounds do not stand actually in the first rank.

Hydrogen peroxide (H_2O_2) powerfully restrains the development of bacteria, even, according to Miquel, in the proportion of 1 part in 20,000; but its killing powers are not very great, and it is unstable.

Permanganate of potash ($KMnO_4$) in 4 per cent. solution kills anthrax spores in forty minutes (Krönig and Paul), and a 1 per cent. solution kills non-sporing bacteria in a few minutes. The salt has, however, inconvenient staining properties, and its activity is much impaired in presence of organic matter, which it rapidly oxidises, becoming inert as it does so. As a gargle a 2 or 3 per cent. solution of permanganate of potash is very valuable: Gordon found that after gargling such a solution the mouth was purged for one or two hours of some 95 per cent. of its bacteria.

Persulphate of potash ($K_2S_2O_8$) and the corresponding ammonium salt are fairly good disinfectants, and Wacker found them equal to carbolic acid in germicidal value, or even better. The persulphates do not stain like the permanganates, but appear to have all the advantages of the latter, and are now comparatively cheap.

I spoke just now of hypochlorous acid. There is evidence—physical, chemical, and bacteriological—that chlorine acts in the form of hypochlorous acid (HClO), and that the action of those disinfectants which owe their virtue to chlorine is probably to be thus explained. Pure hypochlorous acid is one of the most intense germicides known. I have recently worked out its powers, and I find that a solution containing 1 part in 5000 kills anthrax spores in five minutes, while so dilute a solution as 1 in 100,000 kills *Staphylococcus pyogenes aureus* in less than a minute. This is only true in absence of organic matter, which promptly decomposes hypochlorous acid and renders it inert. But the fact of this intense germicidal activity furnishes the key to explain the value of certain well-known and valuable disinfectants, amongst which I will mention chlorine water, bleaching powder, and mixtures of hydrochloric acid with oxidising agents.

Chlorine water.—Dry chlorine gas has little disinfectant power, but in the presence of water it is very powerful. Wet anthrax spores can be destroyed by chlorine fumigation. It is commonly taught that this is due to the affinity of chlorine for hydrogen, whereby water is decomposed and nascent oxygen liberated. Modern physico-chemical investigations, however, have proved that in dilute chlorine solutions the chlorine exists almost entirely in the form of hydrochloric and hypochlorous acids, and Dr. Orton and I are publishing experiments which go far to prove that it is the hypochlorous acid which is the effective germicide in chlorine water, and hence inferentially in other disinfectant mixtures in which chlorine plays the central part. Chlorine water is an admirable disin-

fectant. A solution of three parts by weight of chlorine in 10,000 of water was found by Krönig and Paul to kill anthrax spores in two minutes, and I can confirm this. But you must remember that organic matter much impairs its activity.

Bleaching powder solutions owe their germicidal power to the calcium hypochlorite which they contain. In solution this is dissociated into positive calcium ions and negative ClO ions. A saturated bleaching powder solution is of marvellous chemical activity. Here is a sponge. I pour over it some saturated bleaching powder solution, and you see that in a minute or so the sponge is resolved into a pulpy mass, which will presently completely dissolve. Yet this very solution takes nearly ten minutes to kill anthrax spores. Non-sporing bacteria are killed at once by much weaker solutions than this. But if we were to add to the bleaching powder solution a weak acid, such as 1·25 per cent. acetic acid, or even vinegar, its disinfectant powers would be enormously increased owing to liberation of free hypochlorous acid. This strong solution, diluted threefold with weak acetic acid, will kill anthrax spores in less than a minute. There is a special use for plain bleaching powder solutions in the disinfection of sputum. They are alkaline owing to the lime which they contain, and they thus dissolve mucus. Bleaching powder is incomparably the best disinfectant for sputum; mercuric chloride and carbolic acid coagulate its outer layers, and do not properly disinfect the central portions.

Mixtures of hydrochloric acid with oxidising agents.—This is another way in which hypochlorous acid is directly produced. In the excellent gargle known as "liquor chlori" the oxidising agent is chlorate of potash. Far more active is the mixture devised by Krönig and Paul. They recommend a 1 per cent. solution of potassium permanganate, to which is added about one part per cent. of strong liquid hydrochloric acid. The germicidal value of this mixture is enormous in the absence of organic matter. I find that it destroys anthrax spores in less than thirty seconds. It is unfitted for disinfecting pus, fæces, etc., because the permanganate is oxidised by the albuminous matter, unless added in such excess that it still retains its characteristic purple colour; but it is by far the best mixture yet introduced for disinfecting a surgeon's hands, as it does not injure the skin. Unfortunately it stains them deeply, but the stain can easily be removed with oxalic acid. I have lately been experimenting with Dr. Orton on a mixture of a similar kind, made up with persulphate of ammonia and hydrochloric acid. This has no staining properties, and seems equally active after it has been made up a few days, though not at first. We think it may prove useful in surgical practice, especially as it seems less influenced by the presence of organic matter.

The phenol group.—Carbolic acid is one of the most approved disinfectants in general use; it has stood the test of practical experience, and has perhaps fewer drawbacks than most other germicides. Phenol has the formula C_6H_5OH, and in watery solution undergoes ionisation into a positive hydrogen ion and a negative phenoxyl ion, the latter being the active disinfectant agent. In alcohol, oil, and glycerine solutions this ionisation scarcely occurs, and hence such solutions are worthless as disinfectants. Carbolic acid must therefore always be used in watery solution; for practical purposes a 5 per cent. solution is the strongest commonly employed, though slightly stronger solutions can be prepared. The chief limitation of carbolic solutions is their relative inability to destroy bacterial spores. In a strength of 5 per cent. carbolic acid takes weeks to kill anthrax spores, and hay bacillus spores are not destroyed even in two or three months. A 1 in 20 solution of carbolic acid is thus, in this respect, grossly inferior to a 1 in 1000 solution of mercuric chloride; but in its action upon non-sporing bacteria it is practically the equivalent of such a sublimate solution; it kills in a minute or less, and this is all that anyone could desire. Even a 1 in 40 solution kills in a minute or two, and hence for ordinary medical and surgical disinfection, where it is not desired to kill spores, such solutions are fully adequate. The action of carbolic acid is, moreover, not seriously impeded by the presence of albuminous or other organic matter, and in this respect it contrasts very favourably with mercuric chloride. It is, however, a poison to man, and accidents have occurred from its use. It also injuriously affects the skin when its application is too prolonged. But carbolic acid remains one of the best disinfectants against non-sporing bacteria which we possess, because of its general applicability.

The cheaper commercial brands of carbolic acid do not consist of pure phenol. They contain also various other allied bodies, such as cresol; but cresol is about equal in germicidal value to phenol, so that these impure forms of so-called carbolic acid are practically as good as pure phenol, save that they are less soluble in water. Cresol is chemically closely related to phenol, and forms the chief ingredient in a number of useful disinfectants. One of these may be instanced here, as it has attained a somewhat wide use,—namely, "izal." This is not a patented compound: it is produced by distillation from coal products, and while its exact composition is uncertain it appears to consist chiefly of cresol, and not to contain any actual phenol. It is little soluble in water, and is sold in the form of an emulsion. Izal is superior in germicidal power to carbolic acid. In my hands the emulsion sold as "medical izal" has proved itself able to kill *Staphylococcus pyogenes aureus* in two minutes in a dilution of 1 part in 400. Against spores it is relatively inefficacious, but very strong solutions were found by Klein to kill spores in a few hours. Izal is thus a good disinfectant, and it compares favourably with carbolic acid in another respect, viz. its much less poisonous properties to man. It doubtless owes

its relatively non-poisonous character in part to its insolubility in water: dilutions of the emulsion are not true solutions. It can be freely used as a gargle in a dilution of 1 in 200 or less, and it can be taken internally as an intestinal disinfectant, for which it seems fairly efficacious, largely diminishing the number of bacteria in the fæces. For surgical use a mixture of one drachm of izal to a pint of water is adequate: it appears to produce less injurious effects upon the skin than carbolic acid.

Other organic substances.—There are certain other bodies in common use as disinfectants which, in conclusion, deserve mention.

Alcohol is a potent disinfectant against non-sporing bacteria. Plain methylated spirit kills *Staphylococcus pyogenes aureus* in a minute or two, but even absolute alcohol is quite powerless to kill bacterial spores in several weeks' exposure.

Ether and chloroform are equally powerless to kill spores, though they kill non-sporing bacteria readily enough.

Iodoform stands in a peculiar position. Surgical experience is almost unanimous in favour of its utility in the treatment of certain wounds and ulcers. Yet tested in the laboratory it is found to be practically devoid of any disinfectant power whatever. The explanation suggested by Behring is this: iodoform, *quà* iodoform, is no disinfectant, but in contact with the discharges from wounds it is decomposed into other and more soluble iodine compounds which have a disinfectant value, but of the chemical nature of which we are at present ignorant. Iodoform can never rank high as a disinfectant, but it is of undoubted value in the treatment of wounds and of superficial tuberculous processes.

Formalin is a substance which has of late come into some repute. As sold it is a 40 per cent. solution of formaldehyde in water, and it deteriorates on keeping. It possesses a very high degree of restraining power upon bacterial growth, but in watery solution it has much less killing power than might have been anticipated. Its chief value is as a gaseous disinfectant—formaldehyde vapour being in fact by far the most active volatile germicide at our command. Very powerful types of apparatus for gaseous disinfection have now been devised, and there is no doubt of the superiority of this gas over sulphur dioxide and chlorine for room disinfection; but even formalin vapour has little penetrating power, and no gaseous disinfectant can be trusted to accomplish more than a superficial disinfection. It is a useful preliminary after infectious disease, but more radical measures are subsequently required.

[ERRATUM.—In Lecture I, p. 116, the statement appears that nearly all non-sporing bacteria are killed at a temperature of 60° F. This should read 60° C.]

On Dr. Meissen's Results of Sanatorium Treatment for Pulmonary Tuberculosis.

By EUSTACE TALBOT, M.B., M.R.C.P.

THERE has been no more remarkable development in medical treatment of the last few years than that embraced by the somewhat misleading title of the open-air treatment of pulmonary tuberculosis. Those who have seen the magnificent and gigantic buildings that have arisen in Germany and Switzerland at such places as Hohenhonnef, Wehrawald, and Davos will realise with what thoroughness and enthusiasm the Germans have built upon the modest beginnings of Dr. Bodington. It is not my purpose to trace this evolution, but to draw attention to some of the results of the treatment as published in an extremely interesting article by Dr. Meissen, of Hohenhonnef, in the *Zeitschrift für Tuberkulose und Heilstättenwesen* for January of this year. This system of treatment has been in existence long enough to supply us with sufficient material to form some idea of its powers and limitations, and to enable us to answer the questions what sort of proportion of patients with pulmonary tuberculosis are likely to recover, how long is such recovery likely to last, and to what extent are such individuals capable of living ordinary lives. For, as Dr. Meissen points out, the individual invalid attributes greater weight to his power of living an ordinary life than to the pathological condition of his lungs on leaving the sanatorium. So it is the permanency in point of time and of capability of work that are the chief points to aim at, and he arrives at his results from these points of view by the following method:—On leaving the sanatorium every patient is registered under one of four heads: (1) best result, (2) good result, (3) improved, (4) not improved. He prefers terms of this significance to those more usually used, such as "cured," "nearly cured," "improved," and "worse;" for, as he points out, the word cure is capable of so many interpretations, and is likely to lead to so much confusion, that it had best not be used. Of 1731 consecutive cases, 278 were in Class I, 621 in Class II, 412 in Class III, and 420 in Class IV, and in this paper the investigation is confined to Class I. The qualifications for this class are as follows:

(*a*) Disappearance of all râles and sputum, or, if the latter be present in trifling amount, the absence of tubercle bacilli from it.

(*b*) The appearance, general condition, and power of work as in a healthy person.

He adds that the percussion note and breath-sounds become absolutely normal only in the slightest cases and after the course of years. Of the 278 patients who conformed to these conditions he has been able to follow 245 for periods varying between three and eleven years; many of them he

has seen personally from time to time, and of the others he has heard constantly both from themselves and from their doctors. Of these 259, 208, or 84 per cent., are still absolutely healthy and capable of following their occupation; 40, or 16 per cent., have had further symptoms and are in varying stages of invalidism; and 9, or 3·6 per cent., are dead, though in three instances not of lung disease. It may be added that they only are classified as healthy whose local and general condition has remained the same or improved since leaving the sanatorium.

These results must be regarded as very satisfactory, and it is worth while considering how they are arrived at. In the first place, as might be expected, the patients were, in the great majority of cases, in the earliest stages of the disease; thus the average duration of symptoms before admission was six months. As to the condition of the lungs, Dr. Meissen uses the classification which Dr. Turbam has advocated, which has been largely adopted in Germany. According to this classification, patients in the first stage are those whose physical signs point to infiltration of one upper lobe not extending below the third or fourth rib, with or without râles or rhonchi. Pathologically, altered breath-sounds are always present, and in most cases tubercle bacilli are present; in the few in which they are absent there must be a distinct reaction to tuberculin injections.

In the second stage are those whose signs are more marked, and extend over the whole lobe. Râles are present in the majority of cases, and are moist or ringing in character on coughing. The breath-sounds are bronchial or approaching bronchial in character.

All cases with more advanced signs than these are regarded as belonging to Stage III.

That the majority of the cases, although coming under the heading of the first stage, were not at the earliest point where diagnosis is possible is evidenced by the fact that 107 of them had evening temperatures on admission, and that the average duration of symptoms was six months. It is the invariable complaint of those who have the care of these sanatoria that so many cases are sent to them beyond any chance of real improvement, whose best prospect in life is a tolerable invalidism, and in many such cases it is found on inquiry that the precious early months have been frittered away by sea voyages or life in one of the fashionable health resorts, where existence is regulated by pleasure, and invalids are constantly exposed to the many temptations afforded by the sports and pastimes so abundantly supplied.

There is only one case in the third stage who came into this first class, and it is of sufficient rarity and interest to be quoted at length.

He was a student of 20, who came in with the "first stage signs" in his right lung, with medium râles. In the left lung there was a circumscribed but obvious cavity at the level of the third and fourth ribs. There was "severe fever," and bacilli were abundant in the sputum. The cure lasted 235 days in winter and summer. There was much fever, and some hæmorrhages occurred. A gradual but complete recovery took place, the lungs becoming quite dry. The cough and expectoration entirely ceased. Since his leaving the sanatorium he has married and had healthy children, and has lived exactly as a sound man. It is now nine years since his "cure."

This is a remarkable case, and it is interesting to note that it stands alone in Dr. Meissen's record, a fact which emphasises the supreme importance of the date of diagnosis and serious treatment in cases of pulmonary tuberculosis.

Dr. Meissen very rightly insists on the fact that every patient, however well he may feel himself to be, and however few signs he may show, is wise to regard the return to ordinary life as more or less of an experiment, and he is accustomed to warn his patients that they should live the sanatorium life as far as possible in their own homes, and must, at any rate for some time, submit to certain limitations in their lives as compared with healthy people. He adds that it is a pleasure to him to say that in most cases the wisdom of such advice is recognised, and therefore it is followed—a fact to which he attributes no small share in the permanence of the cure which his record of cases shows.

Space does not permit me to go into the details of the routine enforced at Hohenhonnef, or, indeed, into the details of the cases recorded; but one or two opinions are of interest as coming from one who has had such great experience, and who is capable of such a sane and balanced judgment as this paper shows. Thus he says that it does not signify at what time of year the cure is begun, though he owns that the "weather has an undoubted influence on the intercurrent ailments, amongst which he reckons catarrhs, stomach and intestinal disturbances. This influence, however, is not so great that the results are thereby rendered less or more favourable in summer or in winter so long as one considers only that class of case with whom a true and lasting cure alone is possible. The question with the other cases is more of nursing than of curing."

Again, it is interesting to hear that his experience does not teach him that the occurrence or non-occurrence of tuberculosis in the family history has any real influence on the course of the cure. He attributes a far greater importance to the habit of body, especially as regards height, weight, and chest measurement.

As to the means used, he naturally lays great stress on the necessity of following in every detail the hygienic-dietetic *régime* of the sanatorium, to the perfecting of which all the arrangements of the buildings and grounds contribute. He adds that all is practised "without pedantry," a fact to which I can testify. Of the many drugs which

have been recommended he occasionally uses tuberculin, frequently arsenic and creosote, and the guaiacol preparations. He says, however, that he has not been able to convince himself that any of these have exerted any real influence over the course of the cures.

I would refer those who are interested in the subject to this admirable article. They will find there set out in the most temperate manner well-founded reasons for optimism as to the future of these cases, and good evidence of the permanence of the cure which many are inclined to deny in the reaction that has inevitably followed the ridiculous over-praise of the "open-air" cure, of which we heard so much a few years ago.

The Proposed Students' Union.

MEETING OF STUDENTS.

A MEETING was held in the anatomical theatre on Monday, June 8th, at 4 p.m. It had been largely advertised, and was very well attended, our largest theatre presenting quite an unwonted appearance. To those of our readers who are not cognizant of the facts it may be said that a similar meeting was held earlier in the year, at which a very emphatically pronounced wish was expressed for the formation of some more representative body of students than at present exists. With a view to this a committee of three were elected (Messrs. Crawford, Hogarth, and Neligan) to inquire into the possibilities of forming such a body, and also to deal with matters of urgency affecting the welfare of students. It was to receive the report of this Committee that the meeting under consideration was convened.

As on the previous occasion Dr. Eustace Talbot took the chair, and began the business of the meeting by briefly stating its object, and then called upon Mr. Hogarth to read the Committee's report, which briefly was as follows:—The Committee during the first few weeks after its election confined itself entirely to the consideration of the accommodation for students in the prospective new buildings. This was essential, as plans were then under discussion. Having drawn up a scheme of what was considered necessary, the Committee applied to the Medical Council of the Hospital for a hearing. That body appointed three of its members to consider the scheme. It was very well received, and it was stated that, though things were *in nubibus* at the time, there was every prospect of what was asked for being provided. As to a new college the representatives of the Medical Council were not able to hold out such favourable views; but since that time the prospect of one being built has decidedly improved. With regard to the formation of a representative body of students, the three gentlemen stated unofficially that they had no doubt the School authorities would gladly recognise such a union as was suggested; in fact, the whole tone of the proceedings went to prove, if it were necessary to do so, that the Medical Council are not only keenly alive to the welfare of students, but also are glad to receive their suggestions. The second part of the report dealt with the advisability of forming a Students' Union, and with the form it should take. The schemes put forward in the last number of the JOURNAL were recapitulated. The Committee were emphatic as to the need of one, invited a free discussion on the subject, and suggested that, if the meeting were desirous, a Commission should be elected at the close which should have authority to form a Union and draw up its constitution.

Mr. Hogarth sat down amidst loud and prolonged applause.

Dr. Talbot then rose and pointed out what an immense amount of work the Committee had got through, and said that the best thanks of the students of the Hospital were due to its members, and this evidently was the view of the meeting.

Mr. Neligan then opened the discussion by pointing out that two of the main points at issue were—was the Union, if formed, to absorb the Amalgamated Clubs, and so control all the affairs of students, or was it to act in conjunction with the Clubs, leaving the games entirely to them? He for his part inclined rather to the latter alternative, but knew that in doing so he was in a minority. A vigorous discussion followed, in which Messrs. Clarke, Haggard, Talbot, Burroughes, Crawford, Gronë, and others took part, and the statement by the Chairman that the Amalgamated Clubs ought to be absorbed expressed the feeling of the meeting with one or two exceptions. Mr. Clarke asked what accommodation for students was provided at other hospitals, and a table, the result of many visits by the Committee to the metropolitan hospitals, was handed to him. Mr. Hoskyn raised the subject of finance. In answer to questions Mr. Neligan stated that the Amalgamated Clubs were in difficulties. Mr. Hogarth stated that the Committee had not had time to enter into the question fully, but that if the work of the Amalgamated Clubs was to be expanded an increase in the subscription would be necessary. The question of finance was a very difficult one. Messrs. Kimbell, Burroughes, Cleveland, Haggard, Crawford, Talbot, and others spoke, and the opinion that an increased subscription would be necessary was freely expressed. No objection was seen to it. If students were to receive increased benefits from such a Union as was proposed why should they not pay for them? This led to the question as to how the expenses of the Committee had been met, and it was unanimously decided to make a collection on the spot (limited to sixpence), which should also cover the expenses of the proposed commission. The

reading desk on Abernethy's table, which has supported the hands of so many a learned man and borne so much ponderous learning, was for the nonce converted into a collection box, and was circulated upside down through the theatre. It afterwards served for a ballot-box. While the collection was being made the voting for the commission was proceeded with on the lines suggested in the JOURNAL by the Committee. It resulted in the election of the following:—E. Talbot, M.D., H. E. G. Boyle, A. R. Neligan, A. H. Hogarth, A. D. White, S. E. Crawford, T. J. Faulder, G. E. Barry, H. Gauvain, R. Hoskyn, G. B. Griffin.

The meeting then closed with a vote of thanks to Dr. Talbot for presiding, having lasted one hour and a half.

Regarding the meeting as a whole, any one must have been impressed with the extreme keenness which animated the proceedings, and with the good order which prevailed. On the three main points it was practically unanimous, namely—

1. That a Students' Union was necessary (a foregone conclusion).

2. That it should take on and expand the work of the Amalgamated Clubs.

3. That an increase in the subscription to the Clubs was necessary.

Morsque minus poenæ, quam mora mortis, habet.

(*Epistle of Ariadne to Theseus.*)

FRIEND and physician, in yon little case,
So poorly hidden in your palm, abides
That sweet and sleepy essence of the East,
The master-key of Peace, the which who wields
Is lord of death: yet, incompassionate,
Though angry Pity, vocal in your eyes,
Cry "shame" upon your halting, yet you halt,
For fear 't should bate my span of years one hour!
An hour of pangs, an hour whose every tick,
Here in my valley of the shadow, marks
An age of death lived out! Oh! you are hard,
To see me thus, and leave me still denied!

* * * * * *

Behold the price of Reason, Will, and all
Our vaunted barriers 'twixt the beast and man,
That I must pray, and beat my breast in vain,
For what creation's every meanest child
Were granted unbesought! Had you a dog,
So ground beneath this burden of the flesh,
Your ready hand would yield, I dare be sworn,
The boon unasked: but I must writhe and pant,
And see my candle slowly guttered out,
For that I am a man! 'Twere better then
To want this god-like empery of speech,
And turn to brute again.

* * * * * *

Heard I aright?
"A greater risk!" There is no danger, friend,
When what we risk lacks, manifold, the price
Of seaside pebbles idly tossed away.
Talk not of risk. Is not my life mine own?
Say it be God's: at least 'twas given me:
And shall a man continue on his hand
The ring that eats his altered finger through,
Because 'twas given him?
O fearful soul,
Think which were better, that I go to God
Lapped up in happy memories and peace,
Or, like a felon damned, agape to curse
This monstrous interval 'twixt doom and death!

TERTIUS.

Notes.

DR. W. LANGDON BROWN has been elected Junior Demonstrator of Practical Medicine.

* * *

MR. C. G. WATSON, F.R.C.S., and Mr. S. R. SCOTT, M.B., B.S.(Lond.), F.R.C.S., have been appointed Junior Demonstrators of Anatomy.

* * *

MR. K. S. WISE has been appointed Junior Demonstrator of Biology.

* * *

The following Chief Assistants have been appointed in the Out-patient Special Departments:

Diseases of Women	H. Williamson, M.B.(Cantab.), M.R.C.P.
Diseases of the Eye	E. W. Brewerton, F.R.C.S.
Orthopædic Surgery	G. E. Gask, F.R.C.S.
Diseases of the Throat	W. D. Harmer, M.C.(Cantab.), F.R.C.S.; W. Jobson Horne, M.D.(Cantab.), M.R.C.P.
Diseases of the Ear	C. E. West, M.S.(Oxon.), F.R.C.S.
Diseases of the Skin	T. J. Horder, M.D.(Lond.), M.R.C.P.; J. H. Thursfield, M.D.(Oxon.), M.R.C.P.
Dental Department	F. Coleman, M.R.C.S., L.D.S.

* * *

WRITING with the thermometer standing in the eighties it is difficult to realise with what a bitter keenness the north-east wind swept across the Winchmore Hill ground on the day of the Past and Present match. Apart from the extreme discomfort this wind inflicted on the players, it is especially to be regretted for its unfavourable effect on the

attendance of onlookers, and, while congratulating ourselves on the number of the Staff who braved the elements, we must sympathise with them on the unpleasant conditions they experienced.

* * *

WE noticed the presence of several motor-cars, we believe it was the first time they had been seen on the ground. They certainly afford a very much pleasanter means of going to Winchmore Hill than the stuffy forty minutes in the train. Mr. Harmer, Mr. Ackland, and Dr. Fletcher all drove down and brought parties with them, and we have no doubt that on a fine summer's day others would have availed themselves of the opportunity of an afternoon in the country.

* * *

THE match itself was a very good one, being won by the Past by one wicket with very few minutes to spare. This result was mainly due to the admirable bowling of Mr. Willett and to some vigorous hitting by Messrs. Talbot, Boyle, Turner, and Rawling. Mr. Willett bowled exceedingly steadily, hardly sending down a bad ball the whole innings. He always wanted careful watching, and was now and then nearly unplayable.

* * *

FROM the outset the Past realised that the time element was certain to become important, so they were right to start hitting freely. May seemed to us to be the most difficult of the Present bowlers; with the wind blowing strongly behind him the ball came at a great pace with some swerve from leg, which made him very difficult to score from.

* * *

FOR the Present Griffin showed most admirable defence; if he could develop a few more strokes he would be a very formidable batsman. Anderson made several beautiful strokes, but he was obviously short of practice. The fielding was very fair, though several catches were dropped that should have been held,—a fact for which the blue colour of the fieldsmen's hands may reasonably be held responsible.

* * *

ON Monday, June 29th, the Dinner of the 8th Decennial Club was held at the Café Royal, with Mr. Marshall in the chair. This club numbers over 500 members, and it is to be regretted that only fifty-seven came to the dinner, as such gatherings afford the best opportunity of seeing men who have gone into practice. Of course we know that it is often very difficult for men in the country to come up for the dinner, but with an effort it can usually be done, and we feel confident that it is an effort well worth making as a means of renewing many old friendships, and of seeing men whose duties have taken them far from the Hospital.

* * *

A VERY good dinner was provided, and Mr. Marshall made an excellent chairman. After dinner Mr. Valerie sang and Mr. Burroughes was persuaded to tell us of certain experiences with Mrs. Cooper, of Shepherd's Bush, in his own inimitable style. The whole evening was an unqualified success, and the secretaries, Dr. Drysdale and Mr. Waring, are to be heartily congratulated on the fruit of their labours.

* * *

WE notice with great satisfaction that the Raymond-Horton-Smith prize for the best Cambridge M.D. Thesis has this year been awarded to the Hon. G. H. Scott, M.D. This is the third year in succession that this honour has fallen to a Bart.'s student, the two other successful Theses having been those of Dr. Langdon Brown and Dr. Laming Evans. We offer our heartiest congratulations to Dr. Scott.

Interesting Cases of Infective Endocarditis.

By D. O'C. FINNIGAN and W. VINCENT WOOD.

S H—, æt. 60, night watchman, was admitted to Rahere Ward on March 6th, 1903, suffering from "shortness of breath and swelling of the legs."

His illness began at the end of February of this year without any definite onset. It gradually got worse, and in March he had occasional attacks of vertigo. At the age of eighteen he suffered from rheumatism, and since then, twenty years ago, he has had one attack of gout. He is a moderate drinker.

His father died "suddenly," his mother of "apoplexy."

On examination patient is found to be well covered, with prominent eyes and puffy lids. His right pupil is larger than the left; both react well to light and accommodation; conjunctivæ natural. Pulse 110, irregular, fair volume and medium tension; vessel wall somewhat thickened. Respirations 30, temperature 98·4°. Urine alkaline, 1012, no sugar, no albumen. Knee-joints natural; legs œdematous up to knees. Chest: apex-beat felt in fifth left intercostal space, just outside nipple line. No thrills and no epigastric pulsation. A.C.D.: left border of sternum, fourth left costal cartilage, and apex. Sounds: at apex a faint systolic murmur, transmitted upwards and outwards. At second right intercostal space a rough systolic and a doubtful presystolic murmur; the systolic murmur is transmitted into the root of the neck. Lungs are natural; abdomen natural. The presystolic murmur at the aortic base disappeared in a few days, a systolic thrill appearing at the same time. The irregularity of the heart-beats was also modified, a typical *pulsus bigeminus* resulting. The temperature, with the exception of an occasional rise to not higher than 101°, remained subnormal throughout.

The case was diagnosed as one of chronic valvular lesion, with temporary loss of compensation.

Patient improved so much that on May 1st he was sent to Swanley.

During his stay there, a fortnight after leaving the ward, patient suddenly developed spots on both legs. The dyspnœa and œdema of the legs returned, a cough adding much to his discomfort. He remained a week longer at Swanley, and on May 21st he was re-admitted to Rahere Ward.

On examination he is found sitting in bed in position of orthopnœa. Pulse 120, irregular in rhythm and volume, low tension. Respirations 36, shallow and laboured. Temperature 97°. His urine, he says, has been much reduced in amount lately, and is as "black as stout." On testing the reaction is acid, sp. gr. 1022, high colour; it contains a distinct cloud of albumen; no blood. Chest: the apex-beat is neither seen nor felt, no thrills. A.C.D.

upper border of fourth rib, sternum resonant, no dulness to right of sternum. Liver dulness: sixth rib in N.L. A sharp, short, systolic murmur is audible over a limited area, about two inches in diameter, in the fifth and sixth space in N.L. It is not conducted into the axilla. At the aortic base two murmurs are heard; the systolic murmur is loud, clear, and short, and only heard at the second right costal cartilage. The diastolic murmur is much shorter and sharper, and transmitted down the left edge of the sternum. Lungs: both bases show impaired resonance, with weak breath-sounds and crepitations. Abdomen: lower edge of liver felt three and a half inches below costal arch in N.L. It is tender; does not pulsate. Spleen not felt. Legs: œdema of ankles well marked. A purpuric rash, composed of numerous densely aggregated spots, covers both legs up to middle of thighs. The spots are more numerous and darker in tint below than above.

May 28th.—The purpuric rash has gradually faded during last week, and has entirely disappeared to-day. The œdema of the legs has spread upwards, and the breathing has become more laboured. The cough is very troublesome, and keeps patient awake at night. Temperature rose last night to 99·8°; a second rise to-night to 100°. 29th.—Temperature this morning 98°.

June 3rd.—Temperature still remains down, 97·8° this morning. Cough very troublesome. *Lungs:* the dulness at the bases has increased slightly; both lungs are full of bubbling crepitations. 8th.—The œdema is slowly spreading upwards. Urine very scanty, 1014, acid; it contains a trace of albumen and blood. Temp. 97·8°. 10th.—Patient had a fainting attack to-day; pulse is very irregular, at times scarcely palpable. Temp. 98°. 11th.—Slightly better to-day; pulse is fuller and tension higher; irregularity of rhythm and volume very marked. Temp. 97·4°. 12th.—A purpuric rash appeared last night on both hands and forearms; the spots on the hands are dark red, the largest about one eighth inch in diameter; the smaller ones about half that size. They do not fade on pressure. The rash on the lower extremities has also reappeared: it is to-day much denser than on admission. The œdema of the legs has now spread up to the middle of the thighs. 13th.—Rash more pronounced to-day, a new crop of spots having come out during the night. Sputa tinged with blood. Urine much diminished, only seventeen ounces yesterday. *Chest:* heart-sounds very feeble to-day; no other change. *Lungs:* dulness at both apices behind up to eighth spine, with diminution of breath-sounds and vocal fremitus. Crepitations over rest of lung. Temp. 97°. 15th.—Rash on hands has a deeper purple tint than yesterday; spots seem to have increased in size. Œdema of hands beginning. Pulse very feeble, 80 at the wrist; 108 heart-beats to the minute. Pulse is at times not palpable at all. Heart-sounds very feeble; murmurs weaker. Temp. 96·8°. Sputum almost pure blood. Urine seven ounces yesterday. 16th.—Death of heart failure.

Result of post-mortem examination.—External appearances: body wasted, some œdema of feet; very numerous petechial hæmorrhages on the body and limbs, on the wrists, hands, ankles, and feet. The hæmorrhages were of large size and deep purple in colour. Pleural hæmorrhages over the left lung. Hydrothorax on both sides; some dense pleural adhesions on the right side. Both lungs were congested and œdematous. *Heart* seventeen ounces; layers of the pericardium partially adherent. Some pericardial hæmorrhages. Left auricle greatly dilated; some hypertrophy with moderate dilatation of the left ventricle. The mitral segments were thickened and adherent, and the orifice constricted; there was a fringe of small recent vegetations on this valve. The aortic cusps were greatly thickened and deformed; masses of fibrinous vegetations were attached to them. The papillary muscles showed well-marked fatty change at their apices. The pulmonary and tricuspid valves were natural. No atheroma of the aorta in any part. Extensive peritoneal hæmorrhage in the transverse mesocolon. Submucous hæmorrhage and general congestion of stomach. *Liver:* early "nutmeg" change. *Spleen* three ounces; very small, adherent to diaphragm; a recent anæmic infarct at one end. *Kidneys:* capsules moderately adherent, surfaces uneven, cortical substance diminished. The surface and substance of both kidneys were stippled all over with minute hæmorrhages; the pyramids showed well-marked streaky deposits of urates. Left great toe-joint contained urates; the right was free.

This case is remarkable for three reasons. First we note the complete absence of any well-marked and constant rises in the temperature; secondly, the small size of the spleen is very uncommon; and thirdly, the absence of embolisms must strike us as noteworthy.

Although numerous fibrinous vegetations were loosely adherent to the mitral and to the aortic valves, so loosely that on the post-mortem table they could easily be brushed off their bases with the examining finger, yet none of these were carried away by the blood-stream. The only manifestation of the infective nature of the endocarditis was afforded in the purpuric rash.

Another feature of this case is that one is enabled to definitely fix the date of the onset of the acute infective process, the patient having been under observation beforehand. He left this hospital with a chronic sclerotic lesion of his mitral and aortic valves. He came back three weeks later with a week's history of the exacerbation. We can safely assume that in some unknown way he acquired a fresh infection to which his damaged valves, constituting a *locus minoris resistentiæ*, fell an easy victim. The course of the disease can so be fixed as of four to five weeks' duration.

The interest in the following lies in the formation of a false aneurysm occurring on the ulnar artery, due to an infective embolus.

A. B. T—, æt. 29, was admitted to Matthew Ward in February of this year with an acute attack of rheumatic fever. There was a history of a previous attack of rheumatism and pleurisy three years previously. The present attack commenced in November, 1902.

On admission patient presented symptoms of joint trouble, pyrexia, and morbus cordis, mitral and aortic regurgitation.

For four months no fresh symptoms appeared. The pyrexia was continuous, the valve lesions remained apparently unaltered, with some increased hypertrophy, while there were no signs of enlarged spleen, and no hæmaturia or hæmoptysis. Progressive anæmia and wasting.

On May 12th patient complained of considerable pain down the right arm, which was found to be swollen and tender just below the flexure of the elbow. The next day there was increased swelling and definite expansile pulsation. As the swelling continued to increase in size Mr. Marsh and Mr. Bowlby advised surgical measures; the brachial was therefore tied just above the bend of the elbow and divided. All pulsation in the aneurysm ceased, and likewise in the radial artery. The patient experienced much relief from the operation. The swelling rapidly disappeared, while the condition of the hand and arm remained satisfactory. Without operation there is little doubt that the leakage would have continued, leading to stoppage of the circulation and gangrene of the arm. Although there was complete recovery as regards the arm the patient continued to lose ground, and died of heart failure three weeks later.

Post-mortem.—Vegetations on the aortic valve and in the left auricle; aneurysm of one aortic cusp; adherent pericardium; aneurysm of the ulnar artery; infarcts of spleen and kidneys. The leakage had occurred just below the division of the brachial into the radial and ulnar arteries, so that probably the embolus had lodged at the junction. The cut artery was united by a fibrous cord.

The antistreptococcic serum was used for a considerable period without any apparent effect, also the administration of yeast.

These cases are published by the kind permission of Sir Dyce Duckworth, Mr. Marsh, and Dr. Tooth.

Specific Antibodies.

DEAR SIR,—In teaching, as in arguing with a view to convince, the teacher, to be successful, must ascertain the mind of the pupil, and find how little he knows, and start his instruction from that point. Many articles in this JOURNAL on special subjects would be of much wider value if the writers did not presuppose so much knowledge of their special line to exist among students and those at work in other paths of knowledge. This more especially applies to new branches of thought, in which often there is necessarily a brand-new set of words to express the new ideas and points of discovery.

Dr. Emery's article on "Specific Antibodies" in the number for December last contains much intensely interesting material, but it starts from too lofty a point to be of

much use to others than those who have already studied the subject carefully, or who can spend much time on re-reading it and looking up references.

The Goulstonian Lectures on the same subject by Dr. Grünbaum in the same way called forth in the medical press a loud chorus of annoyance, based chiefly on the inability to follow the imaginative thoughts that were said to have led to valuable additions of knowledge. Further, it was contended that the nomenclature to a large extent was founded on a set of mnemonic diagrams which caused the argument to take a line rather of imaginary parallelism than of actual facts, and it was said that a simplification of expression with a summarised collection of bare facts should be undertaken before more and more edifices were erected on this foundation.

In Dr. Emery's article above referred to the account of the constitution of diphtheria toxin does not contain a definition of neutralisation, although later in the article it can be inferred. Neutralisation is, of course, considered to be arrived at when the injection has no effect on the animal even as a local inflammation; and the difference between this and death in four days is apparently represented by the amount of poison necessary to be added to the neutralised "Lo" dose to kill in that time. Are we to conclude that the antitoxin leaves the toxones of the first portion of filtered broth and unites with the prototoxoids and toxins of the second portion?

It is stated that the experiments described prove that the poisonous properties and the combining power of the toxin molecule reside in separate groups of atoms named toxophore and haptophore, instead of, as was previously held, that the toxin united with part of the cell contents, and that the new compound damaged or killed the cell. Does the toxin molecule here mean the molecule free of toxones and toxoids, which appear to have been stated by Ehrlich to be separate bodies? In whichever way this may be answered, how do the experiments prove the new theory?

The cell is described as having groups of atoms at its periphery, drawn in the illustrations as a sort of peg at the circumference and called receptors, which are said to seize on the haptophore group of the toxin molecule, taking them by mistake for some similar groups in some edible proteid molecule. Previously it was thought that the cell was bathed in lymph, and that this or parts of it penetrated into the cell, which had selective and excretive powers. How does the first theory better explain the facts than the second?

It is supposed that the production of these pegs and their being thrown off is stimulated by a non-lethal dose of poison. Previously it was thought that the latter stimulated the cell to produce the compound that united with the toxin in greater quantity than usual, and to excrete it into the lymph-stream. Why should we give up the latter theory?

The writer has taken up his pen in hopes of stimulating Dr. Emery to throw off some receptors to combine with the haptophore groups of our thirst for knowledge, and to again indulge your readers with a further communication, elucidating these points, and summarising his conclusions so as to show as far as possible to what these new theories have led, and what they have demonstrated.

MOTUS EXSPECTATIONE.

Amalgamated Clubs.

THE Annual Sports were held at Stamford Bridge on June 25th in perfect weather. The band of the T Division of the Metropolitan Police supplied the musical part of the programme. There was only a moderate attendance of spectators, but these witnessed some close and exciting "finishes" as the result of judicious handicapping. W. H. Orton was in great form, and easily proved successful in holding for another year the Challenge Cup for the 100 yards. He defeated the holder of the Quarter-mile Challenge Cup, and won the 120 yards Handicap from scratch without any difficulty in 12⅗ sec.

There were large entries for the "strong man" events. F. P. Young won the "weight" with a "put" of 35 ft. 8½ in., and H. E. G. Boyle threw in good style, and was second. There was some heavy handicapping for the hammer, but H. E. Graham's throw of 74 ft. was not beaten. The jumping events were poorly contested, but the competitors were obviously out of practice. The mile was a good race for the spectators. H. E. Graham, scratch, ran exceedingly well, but could not overtake A. N. Candler, 75 yards, who finished very strongly; W. W. Jeudwine was a good third. The hurdles produced an exciting race from start to finish. A. H. Hogarth took the lead early, but was nearly overtaken by R. C. P. Berryman in the "run in." The "half-mile" was the most exciting event of the day. W. E. Lee, 75 yards, and R. S. Townsend, 70 yards, struggled for supremacy right up to the post. Townsend led in the last straight by 6 yards, but Lee forged his way ahead in the last ten yards.

Only four entered for the freshers' race. B. A. Keats beat E. R. Evans by 2 yards.

The Junior Staff race was more exciting than for some years. There were six entries. V. G. Ward led all the way till the last 10 yards, when F. H. Noke rushed ahead and won by 1 foot. R. H. Urwick was well up, and the remainder, W. W. Jeudwine, F. Gröne, and E. C. Mackay, finished all in a bunch. It has not yet been decided who was really last. R. M. Ranking had been the favourite, but he overput in the weight, overleapt in the

long jump, and finally overthrew himself in the hammer, and so he could not run.

The sack race was a new item, and gave rise to a good deal of merriment. N. M. Wilson was the first to arrive, and P. Gosse, rolling in with his wonted vigour, was not far behind: his enforced absence this year from more serious running is much to be regretted.

During the afternoon some members of the Staff arranged a hammer-throwing contest among themselves. Dr. Morley Fletcher threw the hammer 30 feet in one direction and himself 10 feet in the other, thus giving ocular demonstration of the well-known law that action and reaction are equal and opposite. Mr. Bruce Clarke was a good second.

A motor-car race was suggested, but in the absence of the premier motorist of the Staff this was ruled out of order.

Mrs. Bowlby very kindly consented to distribute the prizes.

The thanks of the Committee are due to the President, Mr. Bruce Clarke, for his unflagging energy and "what not," and to the judges, Drs. Drysdale and Morley Fletcher, and Mr. Waring for the "thoroughness" with which they performed their duties; and also to Mr. Bowlby for the military precision with which he started the races. L. Furber, the official timekeeper, was conspicuous, but not on the track.

The following are the results:

100 Yards Challenge Cup Race.—Final heat: W. H. Orton 1; B. Butcher 2; A. Forrester 3. Won easily by five yards. Time 10⅘ sec.

One Mile Handicap.—A. N. Candler, 75 yards start, 1; H. E. Graham, scratch, 2; W. W. Jeudwine, 100, 3. Won by twenty yards; half that distance between second and third. Time 4 min. 42 sec.

Putting the Weight Handicap.—F. P. Young, scratch, 35 ft. 8½ in., 1; H. E. G. Boyle, scratch, 33 ft. 2 in., 2; W. H. Scott, all 4 ft., 32 ft. 11 in., 3.

Quarter-mile Challenge Cup Race.—W. H. Orton 1; H. E. Graham 2. Won by fifteen yards. Only two finished. Time 54 sec.

Long Jump Handicap.—B. N. Ash, scratch, 18 ft. 5½ in., 1; A. H. Hogarth, scratch, 18 ft. 2½ in., 2; R. C. P. Berryman, all 8 in., 17 ft. 5½ in., 3.

Freshers' 220 Yards Level Race.—B. A. Keats 1; E. R. Evans 2. Won by two yards. Only two finished. Time 25⅖ sec.

120 Yards Hurdle Handicap.—A. H. Hogarth, owed 7 yards, 1; R. C. P. Berryman, owed 4, 2. Won by a yard. Time 20⅕ sec.

Half-mile Handicap.—W. E. Lee, 75 yards start, 1; R. S. Townsend, 70, 2; F. Whitby, 55, 3. Won by two yards; fifteen yards between second and third. Time 2 min. 8 sec.

Throwing the Hammer.—H. E. Graham, scratch, 74 ft., 1; H. T. Wilson, all 10 ft., 73 ft. 2 in., 2; R. M. Ranking, all 8 ft., 72 ft. 6 in., 3.

High Jump Handicap.—H. T. Wilson, all 3 in., 5 ft. 3¼ in., 1; B. N. Ash, all 3 in., 5 ft. 1¼ in., 2.

120 Yards Handicap.—Final heat: W. H. Orton, scratch, 1; B. Butcher, 5 yards start, 2; B. A. Keats, 6, 3.

120 Yards Level Race (Junior Staff).—F. H. Noke, 1; V. G. Ward, 2. Won by a yard. Time 14⅖ sec.

Sack Race.—N. M. Wilson 1; P. Gosse 2.

CRICKET CLUB.

ST. BART.'S *v.* SOUTHGATE.

The above match took place at Southgate, on Saturday, May 30th, and ended in a decided victory for the home team by 198 runs.

SCORES.

SOUTHGATE.		ST. BART.'S.	
J. C. Bevington, b Page	1	C. Elliott, c Ricketts, b Lewis	2
R. B. Heygate, c Griffin, b Page	18	L. L. Phillips, c Heygate, b Lewis	1
C. Browning, b Griffin	0	C. Armstrong-Dash, b Heygate	3
A. Ricketts, b Page	33	F. V. Hogan, b Lewis	3
T. M. C. Levick, b Griffin	2	W. B. Griffin, b Heygate	6
R. E. Paige, b Page	4	W. S. Nealor, b Lewis	12
N. V. B. Jacob, b Page	15	G. F. Page, b Heygate	21
F. S. Lewis, c sub., b Page	45	N. Walker, b Heygate	0
R. S. Dickson, c sub., b Page	0	G. H. Adam, not out	5
L. R. Lewis, not out	71	A. J. Symes, b Lewis	1
H. J. Ricketts, c and b Page	51	Extras	2
Extras	16	Total	58
Total	256		

BOWLING ANALYSIS.

	Overs.	Maidens.	Runs.	Wickets.
Page	18	5	37	8
Griffin	21	0	124	2
Adam	5	0	30	0
Phillips	1	0	9	0
Hogan	3	0	13	0
Armstrong-Dash	3	0	27	0

ST. BART.'S *v.* THE WANDERERS.

This match took place at Winchmore Hill, on Monday, June 1st, and ended in a win for the Wanderers by 114 runs.

SCORES.

ST. BART.'S.		WANDERERS.	
W. B. Griffin, c Brooks, b Carr	14	B. B. Brooks, b Eckstein	51
H. B. Hill, c Carr, b Jephson	3	A. Latham, c Griffin, b Page	18
H. E. G. Boyle, b Wells	19	L. S. Wells, b Eckstein	35
W. S. Nealor, b Wells	8	J. Carr, b Eckstein	4
J. F. Gaskell, b Wells	0	E. R. Fischer, c Phillips, b Page	24
E. de Verteuil, c Jephson, b Carr	14	E. H. Fischer, b Gaskell	9
H. V. Hogan, c Carr, b Wells	1	P. Burton, b Gaskell	8
G. F. Page, c Latham, b Wells	0	J. Hadath, c and b Eckstein	1
L. L. Phillips, c Wells, b Carr	20	A. Boultbee, b Gaskell	2
A. J. Symes, not out	18	D. L. A. Jephson, b Boyle	42
J. Eckstein, l-b-w, b Wells	0	J. Colman, not out	8
Extras	2	Extras	12
Total	98	Total	212

BOWLING ANALYSIS.

	Overs.	Maidens.	Runs.	Wickets.
Eckstein	22	4	73	4
Gaskell	11	0	40	3
Page	11	2	30	2
Boyle	5	0	20	1
Griffin	8	0	30	0

PAST *v.* PRESENT (12 aside).

The above match took place at Winchmore Hill, on Wednesday, June 3rd, in fine but cold weather. The game resulted in a win for the past by 1 wicket and 17 runs. The Present batted first, and the innings realised 189, W. B. Griffin being top scorer with 71 to his credit. The Past started badly with two wickets down and only 7 runs scored. When five wickets had fallen the score stood at 63; then the sixth wicket put on 68 runs, H. E. G. Boyle and C. H. Turner scoring very freely, the former getting 41, the latter 48.

The staff and nursing staff were well represented, and had the weather been warmer no doubt there would have been a record attendance.

SCORES.

PRESENT.	
W. B. Griffin, c Scoones, b Willet	71
J. Gaskell, b Willet	4
L. V. Thurston, b Boyle	24
C. A. Anderson, c Nicholas, b Willet	22
W. S. Nealor, c Orton, b Willet	2
J. Eckstein, l-b-w, b Willet	6
E. de Verteuil, c Scoones, b Stanger-Leathes	4
L. L. Phillips, c Turner, b Willet	16
C. Elliott, b Willet	13
G. F. Page, c Rawling, b Stanger-Leathes	6
A. J. Symes, not out	2
B. N. Ash, b Willet	15
Extras	18
Total	189

PAST.	
H. E. Scoones, b Page	0
C. F. Nicholas, b Gaskell	2
L. Orton, b Gaskell	7
E. Talbot, c Griffin, b Page	35
H. E. G. Boyle, b Griffin	41
J. A. Willet, c Symes, b Eckstein	1
C. H. Turner, c Phillips, b Gaskell	48
H. E. Stanger-Leathes, b Gaskell	30
L. B. Rawling, not out	21
P. W. James, b Gaskell	2
H. T. Wilson, st Symes, b Gaskell	2
A. J. Kendrew, not out	8
Extras	7
Total	206

BOWLING ANALYSIS.

PRESENT.	O.	M.	R.	W.
Willet	23	7	83	8
Stanger-Leathes	12	4	59	2
Boyle	10	2	18	1
Talbot	7	2	15	0
Nicholas	2	0	5	0
Turner	3	0	9	0

PAST.	O.	M.	R.	W.
Gaskell	12	0	71	6
Page	17	2	54	2
Eckstein	5	0	33	1
Griffin	6	0	34	1
Anderson	1	0	9	0

ST. BART.'S *v.* WALDEGRAVE PARK.

This match took place at Winchmore Hill, on Saturday, June 6th, and ended in a win for the Hospital by 4 wickets and 45 runs. For the Hospital P. R. Parkinson and W. S. Nealor were most successful with 86 and 50 respectively.

SCORES.

WALDEGRAVE PARK.	
H. O. Tucker, st Symes, b Gaskell	6
H. E. Devas, c Hamilton, b Page	0
R. Thompson, b Page	22
H. E. Stanger-Leathes, b Gaskell	46
A. Lidbetter, b Parkinson	13
G. A. Medcalf, b Page	14
W. L. Roberts, b Gaskell	0
E. O. Drabble, b Parkinson	7
J. W. Burroughes, b Page	36
B. W. Horsfall, b Armstrong-Dash	16
C. A. Anderson, not out	18
Extra	1
Total	179

ST. BART.'S.	
W. S. Nealor, c and b Stanger-Leathes	50
L. L. Phillips, c and b Stanger-Leathes	18
P. R. Parkinson, c Roberts, b Medcalf	86
J. Armstrong-Dash, c Medcalf, b Stanger-Leathes	38
J. Gaskell, c Thompson, b Medcalf	9
W. H. Hamilton, not out	0
B. Keats, b Stanger-Leathes	3
H. Rimmington, not out	0
G. F. Page, A. J. Symes, C. H. Cross, } did not bat.	
Extras	21
Total	224

BOWLING ANALYSIS.

	Overs.	Maidens.	Runs.	Wickets.
Page	17	4	54	4
Gaskell	18	0	73	3
Parkinson	10	0	28	2
Armstrong-Dash	3	0	15	1
Keats	1	0	7	0

ST. BART.'S *v.* UNIVERSITY.

This match took place at Honor Oak Park, on Tuesday, June 9th, and ended in a win for Bart.'s after an exciting finish, 6 runs being wanted when the last man, A. J. Symes, went in.

University batted first on a wet easy wicket, the wicket becoming worse as the sun increased in heat.

UNIVERSITY.	
A. Lawrence, c and b Griffin	17
K. H. Stokes, b Eckstein	16
W. F. Bowen, c Phillips, b Griffin	10
R. K. Moynan, l-b-w, b Eckstein	0
R. C. Merryweather, b Griffin	20
N. K. Foster, b Eckstein	12
N. C. Fletcher, b Parkinson	0
W. Gilliatt, b Eckstein	4
J. H. Baillie, c Griffin, b Eckstein	0
W. H. King, not out	3
W. L. Fretz, c Page, b Eckstein	2
Extras	4
Total	88

ST. BART.'S.	
W. S. Nealor, b Merryweather	2
L. V. Thurston, b Stokes	11
P. R. Parkinson, c Foster, b Bowen	38
K. S. Singh, b Stokes	1
W. B. Griffin, not out	15
C. A. Anderson, b Bowen	2
C. J. Armstrong-Dash, b Bowen	0
L. L. Phillips, c Fretz, b Bowen	0
J. Eckstein, b Bowen	2
G. F. Page, b Stokes	5
A. J. Symes, b Bowen	9
Extras	9
Total	94

BOWLING ANALYSIS.

	Overs.	Maidens.	Runs.	Wickets.
Eckstein	9	4	22	6
Griffin	13	1	33	3
Parkinson	6	1	13	1
Page	4	1	16	0

2ND XI.

ST. BART.'S *v.* R.I.E.C.

An exciting match was played on June 6th against the R.I.E.C. at Cooper's Hill, which resulted in a win for the Engineers. Bart.'s, however, played a very plucky game.

The home team won the toss and proceeded to face F. Hogan and J. A. Renshaw on a perfect batting wicket at 11 a.m., and we managed to dismiss the tenth wicket at about 3.30 p.m., the total standing at 252, which included 102 made by H. L. Nicholson, and 40 byes which were let by various members of our team, our wicket-keeper having failed to turn up. J. A. Renshaw secured 7 wickets; F. Hogan, S. L. Harke, and A. J. Kendrew one each.

For Bart.'s S. L. Harke and E. de Verteuil went in first and gave an excellent display. The century was put up for no wickets exactly in 45 minutes after play commenced, and the first wicket fell (S. L. Harke run out) for 158. We made in all 211, including E. de Verteuil 83, S. L. Harke 75, N. H. Walker 18.

SEMI-FINAL CUP TIE.

ST. BART.'S *v.* LONDON HOSPITAL.

This was played on our own ground on Wednesday, June 24th, in perfect weather, and resulted in a win for Bart.'s, who will now have to face the winner of Guy's and Thomas's for the final.

Bart.'s won the toss, and elected to bat on a wicket which proved itself a greater friend to the ball than the bat.

Bart.'s were all out for 124, which, it must be confessed, was rather a lucky score; indeed, we looked very like being all out for fifty. E. de Verteuil saved the side by making 59.

It was, however, when London went in that Bart.'s began to shine, for S. L. Harke was bowling on the very top of his form, and with great destruction to London. He secured 6 wickets for 35 runs—a most excellent performance.

London were all out for 81.

SCORES.

ST. BART.'S.		LONDON.	
B. N. Ash, b Clark	11	Pollard, b Hogan	2
S. L. Harke, c Waldron, b Pollard	2	Harrison, c De Verteuil, b Harke	6
E. de Verteuil, b Waldron	59	Wilson, b Harke	8
A. J. Kendrew, b Waldron	4	Day, st Ranking, b Harke	36
W. H. Hamilton, b Waldron	0	Gayton, b Harke	6
C. H. Fernie, b Gayton	11	Vevers, b Hogan	3
F. Hogan, b Gayton	0	Waldron, b Harke	2
B. Keats, c and b Pollard	11	Aspinal, c Ranking, b Harke	0
N. H. Walker, not out	9	Matthews, b Renshaw	0
R. M. Ranking, b Waldron	0	Clark, b Kendrew	8
J. A. Renshaw, b Waldron	5	Watson, not out	1
Extras	12	Extras	9
Total	124	Total	81

BOWLING ANALYSIS.

	Wickets.	Runs.
S. L. Harke	6 for	35
F. Hogan	2 ,,	20
J. A. Renshaw	1 ,,	8
A. J. Kendrew	1 ,,	8

SWIMMING CLUB.

St. Bart.'s v. *Cambridge University.*—The above "water-polo" match was played on Saturday, May 16th, at Holborn Baths, before a very fair attendance (though remarkably few Bart.'s men), and after a very good game resulted in a win for Cambridge by 3 goals to *nil.* In the first half the 'Varsity were rather pressing, Hanschell in goal brilliantly saving many good shots; but in second half Bart.'s picked up, and were very near scoring two or three times, Watkins especially making some good shots. But the passing the whole time was very erratic. Stone also played a good game. Trewby and Milsom must learn to mark their men better. The goals for Cambridge were obtained by Kingdom, Follitt, and Darbyshire. Team:

H. M. Hanschell (goal); C. F. O. White and H. N. Wright (backs); G. J. Watkins (capt.) (half-back); F. Trewby, D. M. Stone, E. G. Milsom (forwards).

The match was preceded by a team race of four a side, Cambridge winning by a quarter of a length, Bart.'s finding Car and Jackson rather too much for them. Team:

D. M. Stone, J. G. Watkins, C. F. O. White, and H. M. Hanschell.

Metcalfe very kindly referred for us.

Both teams afterwards retired to the balcony tea rooms, where they were most generously entertained at tea by Dr. Morgan Dockrell, President of U.H.S.A.

St. Bart.'s v. *Queen's Westminster Volunteers.*—This match was played on May 25th at the Holborn Baths, and after an exciting game ended in a draw of 1 goal each. Bart.'s were without the aid of its centre forward, *i.e.* D. M. Stone, but were nevertheless the better team, each individual man playing up in better form than they had hitherto shown. Watkins was repeatedly conspicuous, getting in many near shots, but half-time arrived without any scoring on either side. The passing and shooting was again rather erratic and wide of the mark, and the men rather got in each other's way, but the whole showed a decided improvement in form. About three minutes before time Watkins, after a fine sprint down the bath, landed our only goal, our opponents getting theirs just before time was called. Team:

H. M. Hanschell (goal); H. N. Wright and G. T. Verry (backs); C. F. O. White (half-back); F. Trewby, J. G. Watkins, and E. G. Milsom (forwards).

Referee: R. McDonagh.

Hospital Musical Society.

ON Monday, June 22nd, the Musical Society celebrated its twenty-fifth birthday by holding a dinner at the Trocadero Restaurant, Dr. Samuel West taking the chair at 7.30 o'clock.

The gathering was a truly representative one, and included, in addition to Dr. West, Drs. Champneys, Griffith, Carter, Norman and Frank Rushworth, all of whom assisted in the first concert ever given at Bart.'s, namely, that of March, 1878.

After the dinner, the toast of the King having been duly honoured, Mr. G. Holroyd gave a delightful rendering of Sullivan's "Take a pair of sparkling eyes," and those who have heard Mr. Holroyd's clear tenor voice need not be told that he was warmly encored.

Dr. West, in proposing long life and success to the Society, gave a most interesting account of its earlier career. It was to increase and strengthen the social side of hospital life that Dr. West got up the first concert twenty-five years ago. This, he explained, was no easy matter, for the Governors had a rooted objection to the Great Hall being used for anything in the way of music, which they held to be frivolous!

After getting the signatures from every member of the Senior Staff, the Governors met, more than once, to consider the question; until finally, after infinite trouble, their consent was gained. But they emphasised the point that they were doing the embryo musical society a great favour by allowing such a thing as *music* in the Great Hall, and intimated that the matter was in no way to be considered a precedent.

Now, however, it turns out that Bart.'s have had a long-continued and most successful series of concerts since that date; and further, that *frivolous* music has been joined by still more frivolous comedy and drama, so that, as Dr. West hinted, in a very short time we may expect to hear of heated discussions at the Governors' meetings as to the advisability of a Dance in the Hall.

In conclusion, Dr. West gave to *all* men the advice, "If you wish to be successful in after life, join the Hospital Musical Society," proving this somewhat sweeping statement by mentioning such names as Drs. Champneys, Griffith, Tooth, Morley Fletcher, Andrewes, Womack, Carter, etc.

Mr. Forster, in replying for the Society, pointed out how its present strength had never been exceeded, if equalled, either on the Choral or the Orchestral side. He mentioned how so much was due to Dr. Morley Fletcher, the

Treasurer, who not only took an active and practical interest in the work, but also kept a good balance at the bank,—a very difficult matter with the heavy expenses of the entertainments.

After Dr. Fletcher had tried unsuccessfully to throw all credit on to other people's shoulders, Dr. Arthur Haydon played a violin solo with much expression.

Dr. Champneys rose to thank the Chairman for so kindly presiding, and passed on to speak of the progress the Choral Society had lately made, hoping that Mr. Hill, the able Conductor, would remain with them for a long time to come.

Mr. Hill having replied, the Chairman announced that, being told it was his duty to sing, he hoped no comparisons would be made if he gave the identical song he sung in the concert of 1878, viz. "A Wreath of Roses." Hearty applause followed, and an encore was granted.

In wishing prosperity to the nurses of Bartholomew's, Dr. Griffith mentioned with what extreme regret we received the news of Miss Courtney Smith's pending departure; and those of us who did not know before were indeed sorry to hear of it.

So much pleasure did Mr. K. D. Bell give with "When dull care" that only the lateness of the hour allowed him to be let off with one encore.

But time was running short, and after Mr. Perl and Mr. Donaldson had been heartily thanked for the excellent way they had accompanied the soloists, and after Drs. Carter, Frank and Norman Rushworth had mentioned that though not taking an active part they were still members of the Society, Dr. Grant caused much laughter by two songs cleverly and humorously sung. After which the National Anthem, preceded by "Auld Lang Syne," in which all joined, brought to an end a most successful, enjoyable, and never-to-be-forgotten evening.

A. F. F.

Reviews.

WHEELER'S MEDICINE AND THERAPEUTICS. Revised by W. R. JACK. Second Edition. (Published by E. and S. Livingstone, 8*s*.)

The general scope of this book will be best understood by the following quotation:—"After the final examination is passed no practitioner should lose time before possessing one of the many valuable monographs on the subject." It is, in short, intended primarily to assist the student who is preparing for his final examination, and consists, practically, of a well-kept note-book on "final grinds." As such it will, we feel confident, prove of great value, for it contains an admirable condensed account of disease from its practical side. Many of the chapters are patterns of the sort of teaching that a good physician would give to a class at the bedside of a "typical case." We would call attention especially to the excellence of the general review of diseases of the nervous system, wherein are laid down certain broad principles which must prove of the greatest use to the student who is just entering this bewildering study. Very rightly Dr. Wheeler insists on the necessity of a right understanding of the outlines of the anatomy and physiology of the central nervous system.

In a work of this kind it is best to avoid discussion on points that have not yet been settled, since such discussion would tend to muddle the student.

Dr. Wheeler rightly believes in dogmatic statement where such is possible, but it is a practice that leads to some rather startling statements. Thus, in speaking of the pathology of gout, he says "there cannot be the least possible doubt that the disease is due either to the accumulation of uric acid in excess or to those conditions which give rise to the excessive formation of uric acid." Again, "All the evidence at present before us, however, seems to disprove the theory that the disease [exophthalmic goitre] arises from excessive thyroid secretion, and to prove that its origin is in the central nervous system." Again, "*Undoubtedly, catarrhal pneumonia is often followed by phthisis.*" The italics are Dr. Wheeler's. But this dogmatism on controversial points is almost inevitable in a book of this nature, and such blots do not seriously affect the great value of such a work to the student.

Dr. Jack has brought the whole work up to date, and is apparently responsible for the more modern pathology and bacteriology. He has done his part very well, and added much to the usefulness of the book.

SQUINT. By CLAUD WORTH, F.R.C.S. (John Bale, Sons, and Danielsson, Ltd.)

Mr. Worth has made the subject of *squint* his especial study for many years, and brings forward the theory that squint is produced primarily by a defect in the fusion faculty. When this sense is defective the eyes are in a state of unstable equilibrium, and ready to squint on slight provocation.

The generally accepted theory of Donders, that the excessive accommodation necessary in hypermetropia to produce distinct vision must be accompanied by excessive convergence, Mr. Worth very justly criticises, and points out that most children are hypermetropic, yet the percentage of squinting children is very low. He is convinced that the squint only occurs when the fusion faculty in these cases is absent or ill-developed.

The author's amblyoscope we consider to be certainly the most useful of the fusion instruments which have been introduced. Its only fault is the slight blurring produced

by the glass reflectors. Were these replaced by polished metal reflectors the instrument would be perfect. It is possible by means of the amblyoscope to develop the fusion faculty in a squinting child after a few lessons. This is of immense advantage, as a desire for binocular vision having been once established, the chances of cure either with or without operation are immensely increased.

On p. 57 it is stated that in the absence of the controlling influence of the fusion faculty esophoria may cause a convergent and exophoria a divergent strabismus. Surely heterophoria cannot be present in the absence of the fusion faculty, and must be replaced by a constant squint. In heterophoria it is the fusion faculty, and that only, which enables the patient to keep his eyes straight.

We note on p. 182 what appears to be a misprint, where it is stated that the power of binocular adduction is estimated by means of prisms with their apices placed outwards. This should of course read binocular abduction.

The work is well worthy of study, and we welcome it as a most useful addition to the subject.

THE REFRACTION OF THE EYE AND ANOMALIES OF THE OCULAR MUSCLES. By KENNETH CAMPBELL. (Baillière, Tindall, and Cox.)

This book can be recommended as a useful introduction to the subject of refraction and various forms of squint. The subject is treated fairly fully, and the chapter on the optical principles involved is particularly lucid.

On p. 55 Mr. Campbell uses the term positive scotoma to express the condition produced in the field of vision by opacities of the cornea, lens, or vitreous. It is true the patient does project these opacities on to his field of vision, but we think it is a pity to make use of such a useful term for so common a condition. The expression is usually applied to that form of local blindness produced by lesions occurring in the anterior portions of the retina, in which the patient complains of a dark patch before his eye, and we think it is better to confine the term to this condition.

PUBLIC HEALTH LABORATORY WORK. By HENRY R. KENWOOD, M.B., D.P.H., F.C.S. (Third edition. H. K. Lewis.)

Every one acquainted with the two former editions of this work will welcome the appearance of a third.

The alterations in that part of the work dealing with the application of chemistry to public health are not numerous but are made with judgment, and enhance the value of the book. A complete section is devoted to methods of analysis of sewage and sewage effluents, in place of two pages in the two former editions, and the whole of coal-gas analysis has been omitted—an arrangement which fairly represents the relative importance of these two subjects to the student of public health.

The chapters dealing with bacteriology have been entrusted to a writer whose name does not appear in the first editions. The aphorism of the writer in speaking of the significance of *Bacillus coli* and *B. enteritidis sporogenes* in water might be applied to bacteriology in general; he says, "The matter is a difficult one, and the question is still very unsettled."

If this be granted, we may fairly say that the methods of bacteriological analysis are expounded in the last chapters of the book with the greatest degree of lucidity and conciseness that circumstances permit.

On page 568 the *B. enteritidis sporogenes* is said to be highly pathogenic, and on page 569 there is said to be no satisfactory evidence that this bacillus has any causal relationship to epidemic diarrhœa. Here, then, would appear to be another question that is still very unsettled. If the bacteriological sections are not so satisfactory as those dealing with chemical analysis, the fault lies with the subject, and not with the writer, who frankly admits the inferiority of the bacteriological analysis of water, air, and soil "at the present time," as he significantly adds. The book should be invaluable to students, and, in fact, to every one who is interested in laboratory work, carried out in connection with public health.

PRACTICAL PHARMACY AND PRESCRIBING. By JAMES CALVERT, M.D., F.R.C.P. (Lewis.)

This is the second edition of Dr. Calvert's well-known handbook, and embodies the course in practical pharmacy which he has delivered for some years at the Hospital. The chief change in this edition is an elaboration of the sections dealing with incompatibility, which is the part of the book that is likely to prove of the greatest use to qualified men, for, as the distance from the first M.B. examination lengthens, most men find their knowledge of practical chemistry getting rusty, and they have to depend more and more on prescriptions learnt by heart to avoid ordering hopeless incompatibilities. We fear that many find a safe if inglorious refuge in the tabloids of the manufacturing chemists. It is to men who are conscious of their own weakness in chemistry, and yet are anxious to avail themselves of the full powers of the *British Pharmacopœia* rather than the ingenuity of the latest American advertisers, that these sections will prove most useful. They are admirably and clearly written, and always from a practical point of view. There are, in addition, thirty-two exercises in incompatibility, with the correct answers, which will well repay more than a hasty reading. We have great pleasure in heartily recommending this book to all Bart.'s students and practitioners.

ST. THOMAS'S HOSPITAL REPORTS FOR 1901, vol. xxx.

This volume of Reports contains an excellent review of the various departments of the hospital. Thus there is an analysis of the cases treated in the medical, surgical, and gynæcological wards, and of the out-patients seen in the maternity, throat, eye, skin, and ear departments. The bare statistics are amplified by fuller descriptions of cases of special interest, the whole making a very full account of the clinical and pathological work of the hospital.

Besides the statistical portions there are obituary notices of Sir William MacCormac and Mr. William Anderson, the latter by Dr. J. F. Payne and Mr. Wagstaffe. They give a good and sympathetic account of these two very different men.

There are also three original articles: "The Various Methods of Operation for the Removal of the Appendix Vermiformis in the Quiet Period," by William H. Battle. "The Advisability of a Revision of the Classification and Pathology of Intussusceptions," with the Report on some interesting cases, by E. M. Corner. "Two Cases of Cirrhotic Ascites in which Great Relief or Cure was effected by Operation," by Herbert P. Hawkins and W. S. Coleman.

The Rahere Lodge, No. 2546.

THE installation meeting of the Rahere Lodge, No. 2546, was held in the Great Hall of St. Bartholomew's Hospital (kindly lent for the occasion by the Treasurer and Almoners) on Tuesday, June 9th. The meeting, which was very numerously attended, was the occasion of a notable gathering of Freemasons, as no less than thirty-one Grand Officers, including the Earl of Lathom, P.G.W., and Sir Edward Letchworth, Grand Secretary, in addition to a large number of other distinguished members of the craft, honoured the Lodge with their presence. Messrs. William Fairbank and Henry E. G. Boyle were initiated, and the Rev. G. F. M. Fielding was elected a joining member. W. Bro. Holden, M.D., the outgoing W.M., installed W. Bro. Ernest Clarke, F.R.C.S.Eng., as his successor in the chair for the ensuing year. The following were then invested as officers of the Lodge:—W. Bro. J. H. Gilbertson, W. Bro. Samuel West, W. Bro. the Rev. Sir Borradaile Savory, Bart.; W. Bro. Clement Godson, W. Bro. D'Arcy Power, Bro. C. P. White, Bro. H. W. C. Austin, Bro. J. H. Drysdale, W. Bro. F. Swinford Edwards, Bros. G. H. Robinson, M. J. Anderson, W. H. Cross, M. L. Trechmann, E. Laming Evans, and P. F. Madden.

A Past Master's jewel was presented to Bro. Holden in recognition of his services during the past year.

A grant of fifty guineas to the Royal Medical Benevolent College at Epsom was confirmed. The Treasurer in his annual statement announced that the finances were in a very satisfactory condition, and that since its foundation eight years ago the Lodge had been able to distribute £500 to masonic and other charities.

The brethren subsequently reassembled at Frascati's Restaurant, Oxford Street, where an excellent banquet was served to a company of one hundred and thirty-one.

The Earl of Lathom, in responding to the toast of the Grand Officers, said he was glad to know how large a measure of success had been attained by the "Rahere," the oldest of the Hospital lodges. It had been the means of introducing into Freemasonry many who would otherwise not have joined, and it had been able to give a large amount of assistance not only to the masonic charities, but also to those more particularly connected with the medical profession.

During the evening an excellent entertainment was given by Bros. Dr. Byrd Page (conjuring), Churcher (humorous recitations), Gammon (musical sketches), and Walter Graham (marionettes).

Examinations.

UNIVERSITY OF CAMBRIDGE.

Anatomy and Physiology.—C. N. Le Brocq, C. H. Ilott, N. G. Horner, T. M. Miller, J. Postlethwaite, H. J. Gauvain, M. Grundy, C. Strickland.

UNIVERSITY OF OXFORD.

Anatomy and Physiology.—C. T. Raikes.

Appointments.

BODVEL-ROBERTS, F. B., M.R.C.S., L.R.C.P., appointed Assistant House Surgeon to the Norfolk and Norwich Hospital.

* * *

CHEESE, F. W., M.R.C.S., L.R.C.P., appointed Assistant House Surgeon to the Salisbury Infirmary.

* * *

COLEMAN, F., M.R.C.S., L.R.C.P., L.D.S.Eng., appointed Dental Surgeon to the East London Hospital for Children, Shadwell.

* * *

GROVES, ERNEST W. HEY, M.D., B.Sc.(Lond.), M.R.C.S., L.R.C.P., to be Assistant Surgeon to the Bristol General Hospital.

* * *

JOHNSTON, D. M., M.B., B.S.(Durham), M.R.C.S., L.R.C.P., appointed Senior House Surgeon at the Stanley Hospital, Liverpool.

* * *

LOW, G. H., M.R.C.S., L.R.C.P., appointed Surgeon to the SS. "Mombassa."

New Addresses.

ALLEN, T. P., Watchet, Somerset.
BURROUGHES, J. H., 169, City Road, E.C.
CHATER, J. S., 10, Steephill, Lincoln.
COLLINGS, D. W., Sycamore House, Woking.
DUDLEY, S. R., 112, Henley Road, Ilford, Essex.
EDDISON, F. R., Bedale, Yorkshire.
GUNDLACH, J., Ryde House, 138, Upper Clapton Road, N.E.
HOWELL, F. M. H., 37, Hillmorton Road, Rugby.
LAUCHLAN, H. D., 18, Station Road, Church End, Finchley.
PICKETT, J., 49, Queen Victoria Street, E.C.
WOMACK, F., 115, Alexandra Road, South Hampstead, N.W.
WRANGHAM, W., Radnor House, Ascot.

Birth.

RUST.—On June 28th, at 30, St. Mary's Road, Higher Crumpsall, Manchester, the wife of John Rust, M.R.C.S., L.R.C.P., of a daughter.